

bursts and 3 pulses of 50 Hz each). The protocol consisted in delivering 2 sessions per day for 15 days (separated by 55 minutes), 4 minutes per session (3600 pulses/session), 30 sessions in total. An intensity of 100% of resting motor threshold (C4). TMS was performed with the Magventure Magpro X100 MagOption equipment, Cool DB-80 double cone coil. The Child Behaviour Checklist (CBCL) for parents was used to assess intervention effects.

**Results:** CBCL results reflect improvements in both internalising and externalising total scores after treatment. Specifically, the patient presents clinically significant decreases in several dimensions such as anxious/depressed symptoms, somatic complaints, and social problems. No adverse effects have been reported since the beginning of the intervention.

**Conclusions:** Internalising and externalising behaviours severity were reduced after 30 TMS sessions. In accordance with the latest systematic reviews on the safety of TMS in the paediatric patient (Zewdie et al, 2020) we propose the development of paediatric guidelines to offer this technique to patients with a history of intolerance or poor drug response.

**Disclosure of Interest:** None Declared

## EPP0015

### Long-term neurotoxicity in paediatric patients exposed to general anesthesia

Is there a relationship between exposure to general anesthesia in children between 0 and 4 years of age and the subsequent development of ADHD in childhood?

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**Introduction:** The Food and Drug Administration (FDA) recently issued new warnings about the possible effects of the repeated or prolonged use of general anaesthesia and sedatives on the brain development of children under 4 years old during surgeries or paediatric procedures.

**Objectives:** To evaluate the possible long-term neurotoxic impact the exposure to general anaesthesia has on the paediatric population from 0 to 4 years, which is the period during which the brain develops.

**Methods:** Initially, a search for observational studies that described the risk of neurotoxicity and alterations in the long-term cognitive development of children exposed to general anaesthesia before 4 years of age, was performed in PubMed between 2016 and 2020.

**Results:** Finally, 5 retrospective cohort studies comparing children exposed and not exposed to general anaesthesia were included in this study. None of these showed significant differences in their main study variables. However, three of these studies found significant differences in some of the secondary variables such as speed of processing, motor skills, internalization of behaviour and learning, and attention deficit hyperactivity disorder (ADHD).

**Conclusions:** In vitro and in vivo studies of anesthetics have shown serious neurotoxic effects in the developing brain. However, the clinical relevance of these findings for children undergoing anesthesia remains unclear.

Most of these studies suggest a strong relationship between exposure to anesthesia in children aged 0 to 4 years, this being greater after multiple exposures. Despite these results, many of these articles conclude that further research is needed on this topic.

**Disclosure of Interest:** None Declared

## EPP0016

### The risk of alcohol use disorders in offspring who had hyperactivity problems: The ALSPAC study

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**Introduction:** There is a paucity of population-based longitudinal studies examining the associations between childhood behavioural problems and alcohol use disorders in later life.

**Objectives:** This study aimed to examine the association between hyperactivity/inattention problems in early adolescence and the risk of alcohol use disorders in young adulthood.

**Methods:** We used data from the Avon Longitudinal Study of Parents and Children (ALSPAC), a population-based prospective cohort based in Bristol, United Kingdom. Hyperactivity/inattention problems at 11 years of age were measured using the Strengths and Difficulties Questionnaire (SDQ). Logistic regression analyses were used to examine associations. E-values (E) were calculated to estimate the extent of unmeasured confounding.

**Results:** Hyperactivity/ inattention problems in early adolescence were associated with a 1.75-fold increased risk of any alcohol use disorders (OR = 1.75, 95% CI: 1.20-2.56; E= 2.90, CI: 1.69) and a 4-fold increased risk of severe alcohol use disorders at age 24 (OR = 4.35, 95% CI: 2.00 – 9.47; E= 8.17, CI: 3.58). We also found a 2.09 (OR = 2.09, 95 % CI: 1.24-3.53; E= 3.60, CI: 1.79) and 1.63-fold (OR = 1.63, 95% CI: 1.07 – 2.49; E= 2.64, CI: 1.34) increased risk of alcohol dependence symptoms and alcohol abuse symptoms at age 24 in offspring who had hyperactivity problems at age 11, respectively.

**Conclusions:** Hyperactivity/ inattention problems in early adolescence were associated with an increased risk of alcohol use disorder symptoms in adulthood, even when controlling for conduct problems. Associations did not appear to differ by gender and unmeasured or unknown confounders were unlikely to alter the observed associations.

**Disclosure of Interest:** None Declared

## EPP0017

### Comparison of irritability, sleep and chronotype characteristics in children with Anxiety Disorder and ADHD

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